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THE BEAN BAG

A newsletter to promote communication among research scientists concerned with the systematics of the Leguminosae/Fabaceae

Number 26 November 1987

From the Editors

Charles R. Gunn and Joseph H. Kirkbride, Jr.

The BB is designed to promote communication among research scientists concerned with legume systematics. To achieve this goal the BB is issued in May and November of each year and features five columns: From the Editors, News (meetings, major events, announcements, etc.), New Readers, Gleanings, and Recent Legume Literature. Data in the Gleanings column are derived from questionnaire sheets which Readers complete and return. If you have news about legume systematics, send it to us for this column. The Recent Legume Literature column contains citations of published research papers of specific interest to BB Readers. Recent is defined as one year old. We rarely will publish a citation that is more than one year old. Specific interest to BB Readers is defined as research papers of interest to a world wide group of legume systematic botanists.

We encourage Bean Bag (BB) Readers to send us notices, observations, etc. This issue includes a revised Directory including separate legume specialty and country sorts for all Readers.

The publication of this issue of the Bean Bag has been delayed by the conversion of our computer and printing equipment. The Bean Bag is now being prepared on an IBM compatible personal computer, and it is being printed on a laser jet printer. We hope you like our new look created by JHKJ.

**Bean Bag address: SBM&NL, Bldg. 265, BARC-East
Beltsville, MD 20705 USA**

TWO NEW LEGUME PUBLICATIONS

Advances in Legumes Systematics, Part 3

by Charles H. Stirton

Advances in Legumes Systematics, parts 1 and 2, were published as part of the Proceedings of the First International Legume Conference held at Kew in July, 1978. In June 1986, the Second International Legume Conference was held at St. Louis, and details of the proceedings are given below. Advances in Legumes Systematics, part 3, arose out of preparations for the second conference, but forms a natural extension of the first. Most papers in part 3 are on topics not included in parts 1 and 2. Together parts 1-3 form an indispensable reference for anyone concerned with the classification, morphology, anatomy, chemistry, genetics, palynology, and phylogeny of legumes. STIRTON, ed. 1987. Advances in Legume Systemtics, Part 3, 466 pp., 117 figures, ISBN 0 947643 07 9. £15.00 plus 15% for postage and packaging from Kew Shop, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB, England.

Proceedings of the Second International Legume Conference

by James L. Zarucchi

The Proceedings volume for the Second International Legume Conference, which was sponsored jointly by the Missouri Botanical Garden and Royal Botanic Gardens, Kew, and held in St. Louis 23-27 June 1986, will be published in the coming months in the Missouri Botanical Garden's series Monographs in Systematic Botany. The volume, ADVANCES IN LEGUME BIOLOGY, will contain thirty-five papers covering a wide range of topics in legume biology; the proceedings are being co-edited by STIRTON and ZARRUCHI. Persons who attended the Conference in St. Louis will receive information concerning the volume in the near future. Other persons interested in this publication should send their inquiry to: Department Eleven, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, USA.

ILDIS Progess Report

International Legume Database & Information Service

by Frank A. Bisby

Laboratories participating in the ILDIS Project are now in the middle of Phase I (1985-9) collating a species diversity database to cover all known species in the Leguminosae. This part of the database includes checklist data (names and synonymy), geographical distribution (by region, country, and area), and "common knowledge" data (life form, conservation status, uses, and vernacular names) for legume species. It is planned to start an information service in 1989 using a communications network and online database sponsored by BIOSIS, to distribute copies of the database on discs, to produce publications, and to run an enquiry centre.

Computerised regional checklists are completed for Europe (at University of Reading), nearing completion for Africa (at Royal Botanic Gardens, Kew), and for the Americas (at Missouri Botanical Garden). Work at the ILDIS Coordinating Centre is nearly complete for standardised data definition, and is in progress for developing software to manage the combined database. The release version of the ALICE software is now under final test (at East Craigs, Edinburgh), and will be used by taxonomic coordinators for editing so as to bring taxonomic consistency to the database.

Work has also started on planning Phase II of the Project - to develop more detailed modules of the database for economically important groups of species to assist research on legume crops and products. Candidates for development in this phase are 1) information on germplasm sources (and possibly links with germplasm databases), 2) information on nodulation and nitrogen fixation data, 3) breeding data, biotechnology records, and plant improvement records, 4) phytochemical data, and 5) disease, pest, and parasite specificity information.

For further information on the Phase I database, or on the September 1988 Workshop to plan Phase II contact: Dr. S. Hollis, ILDIS Coordinating Centre, Biology Dept., Building 44, University of Southampton, Southampton SO9 5NH, United Kingdom.

BIOTIC DIVERSITY AND GERMPLASM PRESERVATION GLOBAL IMPERATIVES

Beltsville Symposium XIII

May 9-11, 1988

Beltsville Agricultural Research Center
Beltsville, Maryland

Sponsored by Beltsville Area, Agricultural Research Service, U.S. Department of Agriculture
with the cooperation of
Friends of Agricultural Research - Beltsville, Inc.

In recognition of accelerating threats to biotic diversity, Beltsville Symposium XIII will focus on the needs and opportunities for preservation and utilization of our natural heritage.

The primary purposes of this Symposium are to discuss recent research results and to identify future research needs for diversity and preservation, both in relation to major national and international agricultural issues. Speakers will include leading researchers, policymakers, and other experts from Beltsville and from around the world. Biotic diversity aspects of the Symposium will include organisms important to agriculture - plants, animals, and microorganisms - and germplasm preservation will emphasize plants.

Discussions will include new technologies, those available and others needed; traditional methodologies that require renewed emphasis and support; and information processing and distribution. Linkages among basic and applied interests, research areas, organizational entities, and national and international concerns will be emphasized. General as well as specific recommendations for emerging research opportunities, approaches, and applications also are objectives of the Symposium.

The 3-day program will consist of 25 invited papers, invited and contributed poster presentations, and demonstrations of computer applications. Visits to specific laboratories and tours of the Beltsville Agricultural Research Center and the National Arboretum are scheduled.

For further information please contact either Co-chairmen: Lloyd Knutson, Biosystematics and Beneficial Insects Institute (301-344-3182) or Allan K. Stoner, Plant Genetics and Germplasm Institute (301-344-3234), Beltsville Agricultural Research Center, Agricultural Research Service, USDA, Beltsville, MD 20705, USA.

The International Organization of Plant Biosystematists (IOPB)

by William F. Grant

An open business meeting of the International Organization of Plant Biosystematists was held on July 27 during the XIV International Botanical Congress in West Berlin.

President Krystyna Urbanska, Geobotanisches Institut, Zurich, Switzerland, welcomed the members who stood for a minute of silence in respect to former President David Valentine. Urbanska reported that a preprint of the book containing manuscripts of invited speakers from the IOPB Symposium "Differentiation Patterns in Higher Plants" which she organized at the Eidgenossische Technische Hochschule (ETH), Zurich, Switzerland, July 13-18, 1986, was on display at the Academic Press book exhibit. The book will be ready for distribution by the end of August.

Liv Borgen, Secretary-Treasurer, reported that membership was steadily increasing and that a list of the members would be printed in the next IOPB Newsletter. Membership fees for the three years 1987-1989 (between Symposia and change of Executive) is U.S. $20. New members and renewals of membership may be sent directly to Dr. Liv Borgen, Botanical Garden and Museum, University of Oslo, Trondheimsveien 23B, 0562 Oslo 5, Norway.

Urbanska, Editor of IOPB Newsletter, said that issue No. 8 had been distributed, and that anyone with contributions for Newsletter No. 9 should send them to her before November (Dr. K. Urbanska, Geobotanisches Institut, Stiftung Rubel, Zurichbergstrasse 38, CH-8044 Zurich, Switzerland). Lead articles and information from individuals on their research activities (Lab Profiles) will be welcomed. Members of IOPB automatically receive the Newsletter.

Marcia Waterway (McGill University Herbarium), election scrutineer, reported on the elction of members to the Executive and Council as follows: Executive, President: Krystyna Urbanska - Switzerland; Vice-President and President-Elect: Shoichi Kawano - Japan; Past President: William F. GRANT - Canada; and Secretary-Treasurer: Liv Borgen - Norway. For the IOPB Kyoto Symposium: Ichiro Fukuda, ex officio. To the Council: J. F. Bain - Canada; Maria A. Cardona - Spain; Jiakuan Chen - China; H. C. M. den Nijs - Netherlands; W. H. Esbaugh - USA; J. R. Estes - USA; B. Jonsell - Sweden; A. Rousi - Finland; C. J. Webb - New Zealnd; and Judy West - Australia.

A report of the Organizing Committee preparing for the IOPB 1989 Symposium in Japan was presented by the Chairman Dr. Schoichi Kawano. Kawano listed the members of the Organizing Committee and stated that the IOPB 1989 Symposium would be held in Kyoto, July 10-14, 1989, and that there would be an opportunity for field collecting. Those interested in attending or presenting papers at the IOPB Symposium should write to Prof. S. Kawano, Department of Botany, Faculty of Science, Kyoto University, Sakyo-ku, Kyoto 606, Japan.

The question of the location for the 1992 IOPB Symposium was raised. One suggestion was holding the Symposium in the USA. Hardy Esbaugh stated that he would speak with some American botanists and report to the Executive.

A reminder that Prof. C. A. Stace, Department of Botany, University of Leicester, Leicester LE1 7RH, England, has stated that the IOPB Newsletter would be an excellent place to report genomic and cytogenetic data, such as DNA density measurements, nucleotypic associations, species which have special chromosome markers, species on which chromosome banding are being carried out, etc. in addition to chromosome numbers of species and hybrids. He offered to collect data and compile for the Newsletter. Please send your data to Stace for inclusion in the next IOPB Newsletter.

Last year Prof. F. Ehrendorfer (Institut fur Botanik, Vienna) stated that IOPB might sponsor "Workshops on Techniques," such as advances in cytology, electrophoresis, etc., and that he would be willing to hold a one-week workshop on cytological techniques at his Institute. Anyone interested in participating or holding a workshop is requested to write to

William F. GRANT who will try to coordinate such a workshop.

As there was no further business, the President thanked those attending for their participation and expressed her wish to see everyone at the IOPB 1989 symposium in Kyoto.

GLEANINGS

BEN MILED (new Reader) needs annual *Medicago* spp. from countries other than Tunisia and offers Tunisian annual *Medicago* spp. Eds. note: Send your want list to George WHITE (USDA/ARS). Address is in accompanying Directory.

BIRCH has coauthored two chapters in Advances in Legume Biology.

BRUNEAU needs seeds of *Cochlianthus*, *Neorudolphia*, *Rhodopsis*, *Spatholobus*, and *Strongylodon*.

CAMERON is studying Australian legume embryology.

CARDENAS is working on *Inga* spp. of Venezuelian Guayana and needs specimens of *Inga*.

CASTRO is studying Argentine *Prosopis* wood anatomy.

CHRISTIAN has started two new projects: Legumes of Louisiana and systematics of annual *Lupinus* spp.

CIALDELLA has finished a monograph of Argentine *Acacia* and offers separates of "The genus *Acacia* in Argentina" published in Darwiniana 25(1-4): 59-111 (1984). Although she will revise *Acacia* for regional floras, her main effort will be in the Polygonaceae.

COMBES is beginning a new project on the genetics of the traditional French cultivar *Phaseolus vulgaris* cv. "Haricot Tarbais," needs viable seeds of *Lathyrus sylvestris*, *L. latifolius*, *L. heterophyllus*, *L. sativus*, and *L. cicera*, and offers seeds of the same spp. in exchange.

COWAN (note new address) will begin working three days a week with MASLIN on section *Plurinerves* of *Acacia* for "Flora of Australia." They will start on ca. 200 spp. from Western Australia and continue with other states as time permits.

CRISP with J. Dale, J. Kuo, and K. Dixon of Western Australia have submitted a manuscript to *American Journal of Botany* on the phylogenetic significance of 'cord roots' (a unique mode of anomalous secondary thickening) in *Daviesia* (Mirbelieae).

DELBOS is working with the *Lathyrus* database, needs *Lathyrus heterophyllus*, *L. latifolius*, *L. sativus*, and *L. sylvestris*, and offers the same from Europe and some *Vigna* collections cultivated in France.

DUKE is interested in *Castanospermum australe* because of reported antiAIDS activity. Needs climatic data where it fruits successfully: Frost, periodicity, etc., yield data, and a few viable seeds for seedling studies.

FORTUNATO is beginning new projects on *Rhynchosia*, *Eriosema*, and *Galactia* in South America and on *Mimosa* in the Southern Cone of South America, and needs *Mimosa* material from Bolivia, Paraguay, Argentina, and Uruguay.

GILL is conducting research on the effects of gamma radiation on agronomic characteristics of twelve *Glaycine max* cultivars.

GUNN is pleased to announce that Sandra SAUFFERER (new Reader) is returning to Systematic Botany, Mycology and Nematology Laboratory to assist in preparation of the last in a series of three USDA/ARS Technical Bulletins on legume seed morphology. This one will treat genera in subfamily Faboideae. See LERSTEN.

HANNON will start a project on conservation of endangered taxa in cultivation.

HIDALGO is grouping germplasm using morphological characters. Offers *Phaseolus* germplasm. Has contributed "*Phaseolus*: world collection" to the book in press "Genetic Resources, Domestication and Evolution of *Phaseolus* Beans."

HOC is studying the Argentine *Vigna* spp. and tribe Ingeae for "Flora del Chaco" and "Palinoflora de Corrientes."

HUGHES offers seeds of Central American woody legumes, especially *Gliricidia*, *Leucaena*, *Albizia*, and *Parkinsonia.*

HUSAINI is conducting a chromosome survey of *Crotalaria* spp. found in northern Nigeria. Needs *Crotalaria* reprints and offers *Crotalaria* seeds.

ISELY will contribute Leguminosae in part for new Jepson Flora of California.

KEIGHERY is studying amphicarpy in *Vigna* in North Western Australia and offers wild seeds of Western Australian legumes from tropical Western Australia.

KOPTUR (new address) has in press an ecological article on vetches with extrafloral nectaries. Is starting a new project on the costs and benefits of extrafloral nectaries on sympatric *Vicia* spp. in northern England, needs phytochemical analyses of foliage and flowers of *Vicia* spp. (especially *V. sativa*, *V. sepium*, *V. cracca*, and *V. hirsuta*), and offers dried specimen or samples of *Vicia* and legumes from the Everglades, USA.

KRETSCHMER needs *Aeschynomene* spp. from the African highlands and offers *Macroptilium atropurpureum* from Mexico and Colombia.

LAVIN is analyzing chloroplast DNA of the Robinieae.

LERSTEN, GUNN and Brubaker are studying the lens and hilum anatomy and morphology of Caesalpinioideae and Mimosoideae.

LEWIS needs Neotropical *Caesalpinia* seeds and offers identifications of Neotropical *Caesalpinia* herbarium specimens.

LONG has begun to study *Melilotus-Medicago* differences in nodulation by *Rhizobium*, needs *Melilotus* or *Medicago* non-nodulating lines, offers many strains and genetic variants of *Rhizobium meliloti.*

MASCHERPA has begun developing an automated plant identification system using Phaseolinae data.

MASLIN. See COWAN.

MILTON has a new project on *Acacia karoo* seed dynamics and offers seeds or other material of *Acacia karoo.*

MOSS is studying distributional patterns and centers of diversity for Asiatic *Vigna* spp.

OKOLO is studying pollen of Nigerian crop plants. Needs and offers legume pollen.

OLDEMAN is accummulating data on legume tree architecture and wants to exchange data.

RAHMAN is studying toxic components of *Canavalia ensiformis* seeds and possible ways to reduce toxicity. Needs reprints on the toxic components in legume seeds and leaves, including methods of their extraction, bioassay, etc.

RICO (new address) is conducting research on generic and phylogenetic patterns in tribe Ingeae. Needs collections of American *Pithecellobium* and *Acacia* (mainly Mexico and Central America). Will name collections of *Pithecellobium* (s.l.) and *Acacia* for the Americas.

SAUFFERER (new Reader). See GUNN.

SIMPSON needs seeds from arid zone spp. of *Caesalpinia* and *Hoffmannseggia.*

STYLES offers limited legume material from Central America and Mexico.

TINDALE needs herbarium specimens of non-Australian *Glycine* and offers Australian specimens of *Glycine.*

TURNER (R.) is mapping distribution of woody legumes in Sonoran Desert region.

VEIGA has begun two new projects: leaf morphology and histochemistry of *Arachis hypogaea* L. cv. Tatu and SO-909 (M.S. thesis, June 1988) and comparative anatomy of *Arachis guaramitica*, *Stylosanthes gracilis*, and *Zornia miriadena* (Ph.D. dissertation, June 1990). Needs recent papers on the morphology and anatomy of *Arachis*, *Stylosanthes*, and *Zornia.*

VERDCOURT retired from Kew on 19 Jan 1987, but is continuing with the Flora of Tropical East Africa project. Reports that *Mucuna* project proceeds slowly.

VIDAL reports that revisions of the following genera for the Flore du Cambodge, Laos, Vietnam will be started soon: *Milletia* and satellites (*Calleryana*, *Pongamia*, *Antheroporum*, and *Imbralyx*) by GEESINK (L), *Dalbergia* and *Derris* by Phan Hoang Ho (P), and *Desmodium* by P. Dy Phon (P).

VIJAYALAKSHMI needs wild material of *Psophocarpus paulustris* and offers in exchange edible varieties of *Psophocarpus tetragonolobus.*

YAKOVLEV needs *Caragana* and *Chesneya* and offers *Caragana.*

YATAZAWA is studying nitrogen-fixing warts of Caesalpinioideae in species lacking root-nodules.

YOPP has a new project to screen for resistance to the new devastating disease Sudden Death Syndrome (SDS) among soybean genotypes, needs germplasm of draught tolerant/resistant soybeans, and offers in exchange new cultivars of nematode and draught resistant soybeans.

ZHENG-YI has begun the Leguminosae for Flora Yunnanica, needs literature listing Leguminosae and giving information on them for Africa or central Africa and on Papilionoideae of South East Asia, and offers in exchange legume specimens and information from Yunnan.

RECENT LEGUME LITERATURE

Eds. Note: Author names in all capital letters are BB Readers. Their full names and addresses are listed in the November 1987 BB Directory. Correspondence about these articles should be sent directly to them.

Akulova, Z., E. Bobrov, YAKOVLEV, et al. 1987. Fabales. In: A. Fedorov, ed., Flora partis Europaeae URSS, 4: 1-253. Leningrad "Nauka."

Anuradha, S. M. J., RADHARRISHNAIAH, and L. L. Narayana. 1987. Numerical chemotaxonomy of some Mimosaceae. Fedde Report. 98: 247-252.

Anuradha, S. M. J., VIJAY KUMAR, RADHARRISHNAIAH, and L. L. Narayana. 1987. Chemotaxonomy some species of *Indigofera*. Fedde Report. 98: 449-453.

Barreto Valdes, A. and YAKOLEV. 1987. Taxonomic study of the genus *Lysiloma* (Mimosaceae) in Cuba. Acta Not. Cubana 0(41): 1-12.

Baskin, J. M., ISELY and C. C. Baskin. 1986. Geographical origin of the specimens of *Orbexilum stipulatum* (T. & G.) Rydb. (*Psoralea stipulata* T. & G.). Castanea 51: 207-210.

BERNHARDT. 1987. A comparison of the diversity, density and foraging behavior of bees and wasps on Australian *Acacia*. Ann. Missouri Bot. Gard. 74: 42-50. [27 bee, 24 wasp, and 8 *Acacia* taxa.]

BONET, B. Leroi, J. C. Biemont, G. Perez and B. Pichalo. 1987. Has the *Acanthoscelides obtectus* group evolved in the original zone of its host plant (*Phaseolus* L.)? In: V. Labeyrie, G. Fabres and D. Lachaise, eds., Insect-Plants. Junk Publishers, Dordrecht, Netherlands.

BRAVO, AGULLO, and PALACIOS. 1986. Additional notes on *Senna crassiramea*, *S. rigidicaulis* and seeds of Series *Aphyllae* (Caesalpiniaceae). Brittonia 38(3): 269-272.

Brewbaker, J. L. 1987. Species in the genus *Leucaena*. *Leucaena* Research Reports 7(2): 6-20. [Taxonomic revision of *Leucaena* with generic description, key to species, and treatment of each species.]

CANE and G. Snyder. 1986. Searching for pollinators of sericea lespedeza. Alabama Agr. Exp. Station 33(2): 13.

CARDENAS. 1986. *Mimosa caudero* (Leguminosae: Mimosoideae), una especie nueva. Ernestia No. 40: 15.

CARDENAS, H. Rodriguez-Rodriguez, and A. Varela de Vega. 1986. *Peltophorum venezuelense* sp. nov. (Leguminosae: Caesalpinioideae). Ernestia No. 41: 1.

Cooke, D. A. 1987. *Pultenaea quadricolor* J. Black is a synonm of *P. laxiflora* Benth. Jour. Adelaide Bot. Gard. 10(1): 127-129.

CRISP and J. M. TAYLOR. 1987. Notes on *Leptosema* and *Mirbelia* (Leguminosae - Papilionoideae) in Central Australia. Jour. Adelaide Bot. Gard. 10(1): 131-143.

DELGADO Salinas, A. O. 1985. Systematics of the genus *Phaseolus* (Leguminosae) in North and Central America. University of Texas at Austin, Ph.D. dissertation. [363 pages, 63 figures, 31 species, keys to all 36 New World spp., but spp. treatments for North and Central American spp. only.]

Cristofolini, G. 1987. Serological relationships among Sophoreae and Genisteae (Fabaceae). Bot. Jour. Linn. Soc. 94(4): 421-432. [20 genera studied using serological cross reactivity of seed proteins.]

Dry Bean Board. 1987. Pulses. Dry Bean Board, P.O. Box 678, Pretoria 0001, Republic of South Africa. [Price unknown. Color photographs of seeds of *Phaseolus* cultivars and examples of seeds of related pulses such as soybean, velvetbean, *Vigna* spp., *Lablab*, *Pisum*, lupines, guar, and surprisingly the poisonous castorbean (*Ricinus communis*). In a separate section there are color photographs of below standard *Phaseolus* seeds, contaminants found in seed samples, and bean plant diseases.]

FERGUSON and K. J. Pearce. 1986. Observations on the pollen morphology of the genus *Bauhinia* L. (Leguminosae: Caesalpinioideae) in the Neotropics. In: S. Blackmore and FERGUSON, eds., Pollen and Spores: Form and Function, pages 283-296. Academic Press, London.

Ferrari, M. R., A. M. Palermo, and C. A Naranjo. 1986. Chromatography studies in seven species of *Vicia* (Leguminosae). Darwiniana 27(1-4): 273-288.

FORTUNATO. 1986. Revision del genero *Bauhinia* (Cercideae, Caesalpinioideae, Fabaceae) para la Argentina. Darwiniana 27(1-4): 527-557.

GILL and J. R. Ayodele. 1986. On the nature of ergastic substances in the seeds of some tropical and temperate Angiosperms - III. Jour. Plant Morphology and Anatomy 3(1): 35-47. [Includes 31 legumes.]

GOMEZ-SOSA. 1986. *Astragalus neobarnebyanus* (Leguminosae): A new species from Peru. Brittonia 38(4): 427-429.

GUEVARA. 1986. Caracterizacion botanica de las Leguminosas. In: A. Montaldo, ed., Las Leguminosas en la alimentacion animal. Revista de la Facultad de Agronomia de la Universidad Central de Venezuela 35: 1-369 (pp. 13-15). [See A. Montaldo.]

GUEVARA. 1986. Mimosoideas. In: A. Montaldo, ed., Las Leguminosas en la alimentacion animal. Revista de la Facultad de Agronomia de la Universidad Central de Venezuela 35: 1-369 (pp. 17-38). [The forage species *Acacia macrantha*, *A. tortuosa*, *Enterolobium cyclocarpum*, *Leucaena leucocephala*, *Pithecellobium saman*, and *Prosopis juliflora* are presented in deltail with 20 photographs; see A. Montaldo.]

GUINET, N. El Sabrouty, H. A. H. Soliman, and A. M. Omran. 1987. Etude des caracteres du pollen des Legumineuses-Mimosoideae des sediments tertiaires du nord-ouest de l'Egypte. Mem. Trav. E.P.H.E., Inst. Montpellier, 17: 159-171.

Hallwachs, W. 1986. Agoutis (*Dasyprocta punctata*): the inheritors of guapinol (*Hymenaea courbaril*: Leguminosae). In: Frugivores and seed dispersal, chapter 22, pages 285-304. Junk Publishers, Dordrecht, Netherlands.

HUGHES. 1987. Biological considerations in designing a seed collection strategy for *Gliricidia sepium* (Jacq.) Walp. (Leguminosae). Commonwealth Forestry Review 66(1): 31-48.

HUGHES. 1987. A new *Leucaena* from Guatemala. Leucaena Res. Reports, vol. 7.

HYMOWITZ. 1987. Introduction of the soybean to Illinois. Economic Botany 41(1): 28-32.

ISELY. 1986. Notes about *Psoralea* sensu auct., *Amorpha*, *Baptisia*, *Sesbania*, and *Chamaecrista* (Leguminosae) in the southeastern United States. Sida 11: 429-440.

ISELY. 1986. Notes on Mimosoideae (Leguminosae). Castanea 51: 202-206.

JANZEN. 1985. How fast and why do germinating guanacaste seeds (*Enterolobium cyclocarpum*) die inside cows and horses? Biotropica 17: 322-325.

JANZEN. 1986. Mice, big mammals, and seeds: it matters who defecates what where. In: Frugivores and seed dispersal, chapter 20, pp. 251-271. Junk Publishers, Dordrecht, Netherlands.

JANZEN. 1986. Guanacaste National Park: tropical ecological and cultural restoration. Ed. Univ. Estadal a Distancia, San Jose, Costa Rica. [103 pages, illustrations, maps. A national park named for *Enterolobium cyclocarpum*.]

Jessup, L. W. 1986. A new combination and new species in *Austrosteenisia* Geesink (Fabaceae - Milletieae). Austrobaileya 2(3): 243-245.

Klein, V. 1986. Contribution to the chemotaxonomy of native wild legumes. Decheniana 139: 214-222.

LARSEN, K., S. S. LARSEN, and WUNDERLIN. 1987. Reorganization of the Cercideae (Fabaceae: Caesalpinioideae). Biol. Jkr. Dan. Vid. Seluk. No. 28: 1-38.

LAVIN and SOUSA. 1987. The Madrensis group of *Coursetia* (Robinieae, Leguminosae). Syst. Bot. 12(1): 106-115.

LEWIS. 1987. Legumes of Bahia. Royal Botanic Gardens, Kew, England. [385 pp., 25 black and white and 16 color plates with 96 photographs, 9 maps. Illustrations by Sue Wickison. £12.00 at Kew or £13.80 by mail from the Orangery Bookshop, Royal Botanic Gardens, Kew Richmond, Surrey TW9 3AB, England. Booksellers may obtain discount by addressing the Finance Section of the Royal Botanic Garden. The only treatment for all the legumes of Brazil was completed in 1876 for the *Flora brasiliensis*; a great many collections and a tremendous amount of knowledge has become available since that time. This publication is a land mark in the taxonomy of legumes for Brazil. It is a comphrensive floristic study of Leguminosae for the state of Bahia, Brazil. This area is important because it is a transition zone between the dry vegetation of northestern Brazil, the savannas of central Brazil, and the wetter forest vegetation of southern Brazil. The taxonomic treatment is prefaced by an introduction discussing the family in general, topography and vegetation of Bahia, numbers of legumes in the state, phytogeography of Bahia, description of format in the taxonomic section, and a discussion of problematic collectors and their collections in Bahia. 132 genera and 741 species are treated in the taxonomic section. Of these 13.9% are endemic to the State, including three endemic genera and numerous endemic species. Keys are provided to the subfamilies, the genera of each subfamily, and the species and subspecific taxa of each genus. Beneath each generic name is give references to revisions and monographs and the number of species and distribution worldwide. For each species, synonymy is given followed by common names, distribution in Bahia (geographically and in habitat), and notes dealing with endemic status, economic uses, unresolved nomenclatural and taxonomic problems, and limited specimen citation. A special effort has been made to demonstrate taxa needing further investigation, particularly those requiring field studies by local scientists. This work will be useful to all botanists working with legumes in Brazil south of the Amazon valley. JHKJ]

Manning, J. C. and VAN STADEN. 1987. The role of the lens in seed imbibition and seedling vigor of *Sesbania punicea* (Cav.) Benth. (Leguminosae, Papilionoideae). Ann. Bot. (Lond.) 59(6): 705-714.

MILTON. 1987. Phenology of seven *Acacia* species in South Africa. South African Journal of Wildlife Research 17(1): 1-6.

Montaldo, A., ed. 1986. Las Leguminosas en la alimentacion animal. Revista de la Facultad de Agronomia de la Universidad Central de Venezuela 35: 1-369. [This volume is composed of the papers presented at the First Symposium on the Leguminosae as Animal Food, Venezuela. It is organized into five sections: 1) Leguminosae, Description (4 papers); 2) Leguminosae, Cultivation (2 papers); 3) Leguminosae as Food (4 papers); 4) Important Tropical Leguminosae as Food for Animals (3 papers on *Leucaena leucocephala*, *Gliricidia sepium*, and *Medicago* spp.); and 5) *Canavalia ensiformis* (5 papers of which two are extensive bibliographies).]

Nageshwar, G., S. M. J. Anuradha, RADHAKRISHNAIAH, and L. L. Narayana. 1986. Distribution pattern of phenolic constituents in the species of *Bauhinia* and its taxonomic significance. Proc. Indian Acad. Sci. (Plant Sci.) 96: 1-7.

Nageshwar, G., RADHAKRISHNAIAH, and L. L. Narayana. 1986. Chemotaxonomy of two genera of Cynometreae. Current Science 55: 103-104.

Nageshwar, G., RADHAKRISHNAIAH, and L. L. Narayana. 1986. Numerical chemotaxonomy of Amherstieae. Fedde Report. 97: 285-289.

Nageshwar, G., RADHAKRISHNAIAH, and L. L. Narayana. 1987. Chemotaxonomy of Amherstieae. Indian Jour. Bot. 10: 32-36.

OKOLO and GILL. 1986. Pollen morphological studies of the subfamily Mimosoideae (Leguminosae) from southern Nigeria. Jour. Palynology 22: 19-25.

PALMER, K. E. Newhouse, R. A. Graybosch, and X. Delannay. 1987. Chromosome structure of wild soybean (*Gylcine soja* Sieb. and Zucc.) accessions from China and the U.S.S.R. Jour. Heredity 78: 243-247.

PEDLEY. 1986. *Acacia maconochieana* (Mimosaceae), a new species from semi-arid Australia. Austrobaileya 2(3): 235-237.

PEDLEY and P. I. Forster. 1986. *Acacia eremophiloides* (Mimosaceae), a new species from southeastern Queensland. Austrobaileya 2(3): 277-280.

Polovinko, A. E., S. M. Batorova, and YAKOVLEV. 1987. Morphological analysis of *Caragana* of series Pygmaeae Kom. 1-22. Ulan-Ude (prep.).

Polovinko, A. E. and YAKOVLEV. 1987. Chemotaxonomic study of some species of the genus *Caragana* (Fabaceae). Bot. Zhurn. 72(3): 318-322.

Prendota, K. and STAINIER. 1986. Observations cytologiques et polliniques des allotetraploides (*Phaseolus acutifolius* A. Gray x *Phaseolus vulgaris* L.). Pollen et Spores 28(3-4): 265-278.

Rajenra Prasad, H., RADHAKRISHNAIAH, and S. M. J. Anuradha. 1986. Chemotaxonomy of Mimosoideae. Indian Jour. Bot. 9: 70-71.

RICO. 1987. *Acacia sousae* (Leguminosae: Mimosoideae) a new species from Mexico. Brittonia 39(1): 130-132.

RICO and SOUSA. 1986. *Pithecellobium campylacanthus*. In: "Adiciones a las leguminosas de la flora de Nicaragua." Ann. Missouri Bot. Gard. 73: 722-724.

Rodriguez, E. 1986. Papillionoideas. In: A. Montaldo, ed., Las Leguminosas en la alimentacion animal. Revista de la Facultad de Agronomia de la Universidad Central de Venezuela 35: 1-369 (pp. 39-48). [Brief descriptions of the following forage taxa: *Aeschynomene*, *Alysicaropus vaginalis*, *Calopogonium mucunoides*, *Centrosema*, *Desmodium*, *Galactia*, *Indigofera*, *Lotus corniculatus*, *Lupinus*, *Medicago*, *Melilotus*, *Phaseolus*, *Rhynchosia*, *Stylosanthes*, *Teramnus*, *Trifolium*, and *Zornia*, and a list of taxa reported in the literature as forage plants; see A. Montaldo.]

Rouge, P., J. Lauga, and M. Richardson. 1987. Tentative phylogenetic trees of the Papilionoideae and Vicieae based upon the amino acid composition of their lectins. Biochem. Syst. Ecol. 15(4): 445-452.

Rudd, V. E. 1987. Studies in *Macherium* (Leguminosae). V. History and fossil names. Phytologia 62(4): 277-281.

Rudd, V. E. 1987. Studies in *Macherium* (Leguminosae). VI. Phytologia 62(4): 282-302.

SMALL. 1987. A taxonomic study of the *Medicago trigonella* (Leguminosae). Can. Jour. Bot. 65(6): 1199-1211.

Sokolov, S. F., et al. with the assistance of R. V. Kamelin, YAKOVLEV, et al. 1986. Areographia arborum fruticumque URSS, vol. 3., Leguminosae - Caprifoliaceae 3: 3-180.

Symon, D. E., D. J. E. Whibley, and J. Z. Weber. 1986. Leguminosae (Fabaceae). In: J. P. Jessop and H. R. Toelken, eds., Flora South Australia, vol. 2, pp. 505-708.

TINDALE. 1987. A new North Queensland species of *Glycine* Willd. (Fabaceae). Brunonia 9: 99-103. [*Glycine curvata* Tindale, sp. nov.]

TINDALE. 1987. Taxonomic notes on three Australian and Norfolk Island species of *Glycine* Willd. (Fabaceae: Phaseoleae) including the choice of a neotype for *G. clandestina.* Brunonia 9: 179-191.

ULIBARRI. 1986. Las especies de Adesmia de la serie Microphyllae (Leguminosae-Papilionoideae). Darwiniana 27(1-4): 315-388. [33 spp., illustrations, keys, descriptions.]

VEIGA, I. J. Godoy, A. Savy Filho, M. A. N. Gerin, and J. F. M. Valls. 1986. Descriptors of peanut (*Arachis hypogaea* L.) used at Instituto Agronomico (Campinas, Sao Paulo state, Brazil). Bol. Tecn. Inst. Agron., Campinas, 108 pp.

VIJAY KUMAR, Prabkakar, Ramayya, and Leelavathi. 1986. Structure, distribution and development of cavitated trichomes in *Indigofera* L. (Fabaceae). Geophytology 16(2): 227-231.

Weber, J. Z. and G. R. M. Dashorst. 1987. Plant portraits. *Pultenaea trifida* J. Black; *Pultenaea trinervis* J. Black. Jour. Adelaide Bot. Gard. 10(1): 157-162.

WEDER. 1986. Inhibition of human proteinases by grain legumes. In: M. Friedman, ed., Nutritional and Toxicological Significance of Enzyme Inhibitors in Foods. Adv. Exp. Med. Biol. 199: 239-279. Plenum Press, New York.

WEILENMANN DE TAU, J. P. Baudoin, and MARECHAL. 1986. Obtention d'allopolyploides fertiles chez le croisement entre *Phaseolus vulgaris* et *Phaseolus filiformis.* Bull. Rech. Agron. Gembloux 21(1): 35-46.

Wheeler, J. R. and CRISP. 1987. Mimosaceae, Caesalpiniaceae, Fabaceae. In: N. Marchant et al., eds., Flora of the Perth Region, vol. 1, pp. 211-309.

Williams, M. C. and GOMEZ-SOSA. 1986. Toxic nitro compounds in species of *Astragalus* (Fabaceae) in Argentina. Jour. Range Management 39: 341-344.

Wilmot-Dear, C. M. 1987. A revision of *Mucuna* (Leguminosae, Phaseoleae) in the Indian Subcontinent and Burma. Kew Bull. 42(1): 23-46.

Wilson, P. G. 1987. Taxonomic notes on some Australian species of *Indigofera* (Fabaceae - Faboideae). Jour. Adelaide Bot. Garden 10(1): 119-126.

YAKOVLEV and O. A. Sviazeva. 1987. On the taxonomy of the new genus *Spongiocarpella* (Fabaceae). Bot. Zhurn. 72(2): 249-260.

Ulibarri, E. A. 1986. The species of *Adesmia* series *Microphyllae* (Leguminosae, Papilionoideae). Darwiniana 27(1-4): 315-388.

Unknown. 1984. List of Leguminosae of Yunnan in Index Florae Yunnanensis, vol. I, pp. 548-639. The People's Publishing House, Yunnan, People's Republic of China. [Submitted by ZHENG-YI and CHEIH.]

Vera, A. 1986. Cesalpinioideas. In: A. Montaldo, ed., Las Leguminosas en la alimentacion animal. Revista de la Facultad de Agronomia de la Universidad Central de Venezuela 35: 1-369 (pp. 49-52). [See A. Montaldo.]

VERDCOURT. 1986. The discovery of some original drawings by Ferdinand Bauer at Kew. Kew Mag. 3: 176-178. [Deals partly with *Glycine clandestina* Wendl.]

VERDCOURT. 1987. The identity of *Vigna strophiolata* Piper (Leguminosae, Phaseoleae). Kew Bull. 42(1): 220.

Wilmot-Dear, C. M. 1987. A revision of *Mucuna* (Leguminosae, Phaseoleae) in the Indian subcontinent and Burma. Kew Bull. 42(1): 23-46.

WUNDERLIN. 1987. A new species of *Bauhinia* (Fabaceae) from Bahia, Brazil. Phytologia 62(2): 282-302.

YAKOVLEV and O. A. Sviazeva. 1987. Notae de generis *Caragana* Lam. (Fabaceae) sectionis Caragana. Novit. Syst. Pl. Vascul. 24: 124-132.